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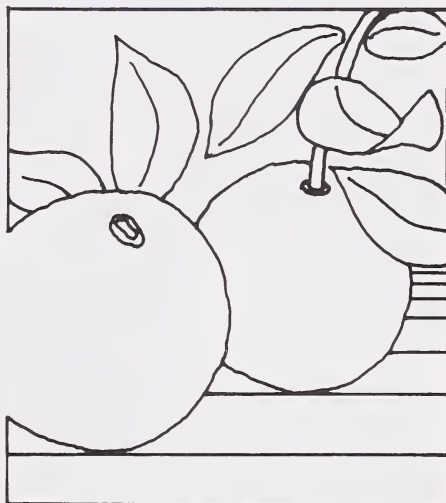
DC BRANCH

CITRUS BLACKFLY

A destructive pest of citrus
and other fruit trees

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U. S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS

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Homeowners' trees, as well as citrus groves, are checked for citrus blackfly infestations.

The citrus blackfly (*Aleurocanthus woglumi*) is one of the world's most destructive pests of citrus. It also attacks mango, persimmon, pear, and other tree fruits.

Originally a native of South Asia, the pest spread to and throughout the West Indies, Central America, and Mexico during the first half of the century. In this country, infestations were found and eradicated in Key West, Fla., in 1936 and in the citrus growing area of Texas in 1956.

Since 1971, an isolated, but slowly spreading infestation—resulting from the blackfly population buildup in Mexico close to the U. S. border—has existed in the lower Rio Grande Valley of Texas. In

February 1976, an outbreak was discovered near Ft. Lauderdale, Fla.. In both cases, the Federal and State governments are cooperating in a control program.

DAMAGE

Blackflies damage leaves by sucking the sap from leaf tissues. They also excrete a "honeydew" that serves as a growing medium for a black, sooty mold damaging to leaves and fruit.

Short-term blackfly infestations can reduce citrus production by as much as 50 percent. Uncontrolled infestations, lasting two seasons, can cause almost total crop failure.

Blackfly damage is of concern to residential, or "backyard", fruit tree owners as

well as to commercial fruit growers. Besides damage to the tree, the black mold covering the leaves and fruit makes the tree unsightly.

DESCRIPTION AND DEVELOPMENT

The citrus blackfly is not a true fly, but is related to the scale insects and aphids. It develops in four stages—egg, larva, pupa, and adult.

The eggs are laid in a distinctive spiral-like pattern on the underside of host plant leaves. Each spiral commonly contains about 40 eggs. Eggs are white when first laid, but soon turn light brown and then black.

Depending on their age, larvae may be dusky, dark brown, dull black, or shiny black, with a dull green spot on the abdomen. All three larval stages are quite spiny.

The pupae, also spined, are shiny black and oval shaped, with a white, waxy fringe.

The adult is about one-sixteenth of an inch (1.37 mm) long and has four slaty blue wings, red abdomen, and whitish antennae. It spends most of its life in a stationary, scale-like form with its beak imbedded continuously in citrus or other host plant leaf tissue.

There may be three to six generations of the blackfly a year.

CONTROL PROGRAM

Immediate objective of the control work in both Florida and Texas is to suppress the blackfly population in the infested areas and thereby reduce citrus crop damage and retard spread. The long-range goal is eradication of the pest.

Program activities include:

- **Surveys**—Surveys are conducted in and around the infested areas to detect any spread of the pest. These are usually scientifically designed statistical surveys which do not require inspecting every tree in the surveyed area. Homeowners' trees, as well as citrus groves, are checked during the surveys.

Intensive surveys are also conducted in all other citrus growing areas of the country to detect any new infestations.

- **Quarantines**—Federal and related State quarantines are enforced to regulate

the movement of materials that might spread the blackfly. Such items include nursery stock and leaves—attached or unattached—of citrus, pear, quince, mango, and other tree fruits. Before regulated materials can be moved from infested areas, they must be inspected, treated if necessary, and certified "pest free."

- **Control measures**—Chemicals and parasites are being used against the blackfly in both Florida and Texas. The parasites are reared in laboratories and then released to attack and destroy the adult stage of the pest. Neither the chemicals, as applied in this program, nor the parasites endanger the environment. New chemicals, some of which show promise of a higher degree of control than those now in use and are also environmentally safe, are being field tested.

The blackfly is established throughout much of Mexico. To prevent wholesale spread of the pest into this country, USDA cooperates with Mexican plant protection officials in the control work in Mexico. This cooperation involves joint surveys, enforcement of cooperative quarantines, and application of integrated control measures (chemical treatments and parasite release) mainly in the U.S.-Mexico border area.

HOW YOU CAN HELP

Your cooperation as a commercial fruit grower or a home fruit tree owner is essential for an effective control program:

- **Comply with quarantine regulations.** Do not move restricted materials from a regulated area without prior approval of quarantine officials. Unauthorized movement of even a few infested host plant leaves could spread the blackfly to a new area.

- **Report suspected blackfly infestations to the nearest Federal or State plant protection office.** Workers will come to your home or grove to investigate. Even if your finding proves negative, the check can be helpful in defining the infested area.

- **Cooperate in the control effort by allowing survey and spray crews on your property.** Two or more spray treatments may be necessary. You will be advised of

the safeguards to follow before, during, and after the spraying. While the chemical is a nonpersistent pesticide not harmful to

humans, pets, or wildlife as used in this application, as with any pesticide, certain normal precautions should be taken.

Citrus blackfly eggs (arranged in characteristic spiral-like pattern) and pupae on underside of leaf.

